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EXAMINER	
DAO, THUY CHAN	
ART UNIT	**PAPER NUMBER**
2192	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,016	EL-SHIMI ET AL.	
	Examiner	Art Unit	
	Thuy Dao	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36 and 41-44* is/are pending in the application.

4a) Of the above claim(s) *37-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36,41,42 and 44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) *43* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment filed on November 21, 2006.

2. Claims 1-36 and 41-43 have been examined.

Response to Amendments

3. Per Applicants' request, claims 1, 9-10, and 36 have been amended, claims 41-43 have been added, and claims 37-40 have been canceled.

4. The 35 USC §101 rejection over claims 1-9 and 36-40 is withdrawn in view of Applicants' amendments.

Restriction/Election

5. Restriction to one of the following inventions is required under 35 U.S.C. 121:

(A). Claims 1-36, 41-42, and 44 are drawn to a computer system, computer storage medium, , and a method for building a health model of software components including an instrumentation collector, a health model generator, and an instrumentation analyzer, classified in class 717, subclass 104 Modeling (emphasis added).

(B). Newly added independent claim 43 is drawn to a method for notifying a computer user when a software component changes comprising an act of monitoring, detecting, and notifying, classified in class 717, subclass 127 Monitoring program execution (emphasis added).

6. The claimed invention are distinct, each from the other because of the following reasons: inventions (A) and (B) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable, but also usable together in a single combination. See MPEP § 806.05(d).

7. Because these inventions are distinct for the reasons given above and the search required for Group (A) is neither required for Group (B), restriction for examination purposes as indicated is proper.

Response to Arguments

8. The Applicants are thanked for a thorough reply. Applicants' arguments filed on November 21, 2006 have been considered but are moot in view of the new grounds of rejection – see paragraphs 13 and 14.

Applicants' amendment necessitated the new grounds of rejection presented in this Office action

Claim Rejections – 35 USC § 112, second paragraph

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-36, 41-42, and 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1:

Claim 1 is a representative claim of the group. Claim 1 recites the limitation "mapped instrumentation" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Furthermore, claim 1 recites two steps of grouping:

grouping instrumentation that result in the same transition from one state of the health model to another state of the health model (lines 12-13); and

grouping instrumentation into groups that have the same state of operation before ... after ... (lines 14-16).

The examiner respectfully request the Applicants clearly specify those claimed limitations. Are those two steps of grouping connected by the word --or-- or --and--?

Claim 1 also recites an instrumentation analyzer (lines 12-16), which does not relate to the instrumentation collector (lines 8-9) or the health model generator (lines 10-11).

In view of specification, section Summary of the invention, page 4, lines 4-8, "...an instrumentation analyzer for mapping and grouping the instrumentation to states of operation of the software component, and a health model generator for creating a health model using the states of operation and the groups of mapped instrumentation." (i.e., creating a health model based on the mapped and grouped instrumentation provided from the instrumentation analyzer, emphasis added).

Accordingly, claims 1, 9-10, and 36 fail to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10:

Claim 10 also recites two steps of grouping as claim 1 above. The examiner respectfully requests the Applicants explicitly specify the connected word --or-- or --and--.

Furthermore, claim 10 recites identified instrumentation and mapped instrumentation (emphasis added). The examiner respectfully requests the Applicants explicitly specify whether they are distinct sets (in view of specification, page 4, lines 4-6, the steps of mapping and grouping yield an instrumentation associated with states of operation of the software component, emphasis added).

Claims 2-9, 11-36, 41-42, and 44:

Claims 2-9, 11-36, 41-42, and 44 are rejected based on virtue of their dependency on the base rejected claims 1 and 10.

Under the principles of compact prosecution, claims 1-36, 41-42, and 44 have been examined as the Examiner anticipates the claims will be amended to obviate these 35 USC §112 rejection, second paragraph.

Claim Rejections – 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-36, 41-42, and 44 rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 7,028,228 to Lovy et al. (art made of record, hereinafter "Lovy").

Claim 1:

Lovy discloses *a computer system for building a health model of software components, comprising:*

one or more processors; system memory; and one or more physical computer-readable media having stored thereon computer- executable instructions representing modules configured to build a health model of software components (e.g., FIGs. 1-2, col.5: 3 – col.7: 22), *the modules including:*

an instrumentation collector for receiving information specifying instrumentation of software components (e.g., FIG. 5, Status Monitoring Module 318, col.7: 66 – coo.8: 38);

a health model generator for creating a health model using the information about the instrumentation of the software components (e.g., FIG. 8, Case Management System 336, col.13: 21 – col.14: 47); *and*

an instrumentation analyzer for grouping instrumentation that result in the same transition from one state of the health model to another state of the health model, the instrumentation analyzer grouping mapped instrumentation into groups that have the same state of operation before the instrumentation is generated and the same state of operation after the instrumentation was generated (e.g., FIG. 4, Performance Monitoring Module 316, col.11: 24 – col.12: 40; FIG. 7, Decision Engine 334, col.15: 36 – col.16: 51).

Claim 2:

The rejection of claim 1 is incorporated. Lovy also discloses *a database for storing the information about the instrumentation of the software components* (e.g., FIG. 11, instrumentation from Database 352, col.21: 31-52; col.16: 38-42).

Claim 3:

The rejection of claim 1 is incorporated. Lovy also discloses *a database for storing the health model* (e.g., FIG. 7, Case Generator 346 and Database 352).

Claim 4:

The rejection of claim 1 is incorporated. Lovy also discloses *the health model comprises a state diagram with a transition from one state to another state for a group of instrumentation* (e.g., FIG. 12, col.23: 38-67; FIG. 19, col.27: 42-60).

Claim 5:

The rejection of claim 1 is incorporated. Lovy also discloses *the instrumentation collector comprises a spreadsheet for manual entry of information about instrumentation of software components* (e.g., col.5: 3 – col.7: 22).

Claim 6:

The rejection of claim 1 is incorporated. Lovy also discloses *the instrumentation collector comprises a parser for automatically parsing a software component to extract*

information about instrumentation of the software component (e.g., col.17: 93 – col.18: 9).

Claim 7:

The rejection of claim 1 is incorporated. Lovy also discloses *the instrumentation analyzer comprises an application that groups the instrumentation events by filtering the instrumentation based upon the state of the software component before the occurrence of instrumentation and the state of the software component after the occurrence of instrumentation* (e.g., col.12: 41-54).

Claim 8:

The rejection of claim 1 is incorporated. Lovy also discloses *the health model generator comprises an application that generates a state diagram* (e.g., FIG. 12, col.23: 38-67; FIG. 19, col.27: 42-60).

Claim 9:

Claim 9 is a computer storage medium version, which recites the same limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 9.

Claim 10:

Lovy discloses *a method for building a health model of a software component, comprising the steps of:*

receiving an inventory of instrumentation of the software component (e.g., FIG. 5, col.7: 66 – col.8: 38);

mapping the inventory of instrumentation to states of operation of the software component; analyzing the inventory to identify instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 4, col.11: 24 – col.12: 40);

grouping the identified instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component, the grouping comprising grouping mapped instrumentation into groups that have the same state of operation before the instrumentation is generated and the same state of operation after the instrumentation was generated (e.g., FIG. 7, col.15: 36 – col.16: 51)*; and*

generating the health model with the states of operation and at least one transition representing a group of instrumentation from one state of the health model to another state of the health model (e.g., FIG. 8, col.13: 21 – col.14: 47).

Claim 11:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of creating an inventory of instrumentation of the software component* (e.g., col.5: 3 – col.6: 67).

Claim 12:

The rejection of claim 11 is incorporated. Lovy also discloses *the step of creating an inventory of instrumentation of the software component comprises parsing the software component to extract information about instrumentation of the software component* (e.g., col.17: 93 – col.18: 9).

Claim 13:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of determining states of operation of the software component* (e.g., col.23: 38-67).

Claim 14:

The rejection of claim 13 is incorporated. Lovy also discloses *the step of determining states of operation of the software component comprises determining a stopped state* (e.g., col.27: 42-60).

Claim 15:

The rejection of claim 13 is incorporated. Lovy also discloses *the step of determining states of operation of the software component comprises determining a running state* (e.g., col.27: 61 – col.28: 23).

Claim 16:

The rejection of claim 13 is incorporated. Lovy also discloses *the step of determining states of operation of the software component comprises determining a failed state* (e.g., col.23: 47 – col.24: 58).

Claim 17:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of adding instrumentation where there is none to indicate an occurrence of a transition from a failed state of operation to a running state of operation* (e.g., col.23: 47 – col.24: 58).

Claim 18:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of adding instrumentation where there is none to indicate an occurrence of a transition from a running state of operation to a failed state of operation* (e.g., col.23: 47 – col.24: 58).

Claim 19:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of persistently storing the inventory of instrumentation* (e.g., col.16: 38-42).

Claim 20:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of persistently storing the generated health model* (e.g., FIG. 7, Case Generator 346 and Database 352).

Claim 21:

The rejection of claim 10 is incorporated. Lovy also discloses *revising the instrumentation of the software component* (e.g., col.15: 36 – col.16; 51).

Claim 22:

The rejection of claim 21 is incorporated. Lovy also discloses *updating the health model using the revised instrumentation* (e.g., col.15: 36 – col.16: 51).

Claim 23:

The rejection of claim 22 is incorporated. Lovy also discloses *generating a new health model* (e.g., col.13: 21 – col.14: 47).

Claim 24:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more events* (e.g., col.12: 41-53).

Claim 25:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more performance counters* (e.g., col.12: 3-12).

Claim 26:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more error messages* (e.g., col.27; 42-60).

Claim 27:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of receiving an inventory of instrumentation comprises parsing the software component to*

extract information about instrumentation of the software component (e.g., col.17: 93 – col.18: 9).

Claim 28:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of receiving an inventory of instrumentation comprises manually entering instrumentation information in a spreadsheet application* (e.g., col.5: 3 – col.7: 22).

Claim 29:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of analyzing the inventory comprises determining the state of operation before an instrumentation event occurs and the state of operation after the instrumentation event occurs* (e.g., col.7: 24-64).

Claim 30:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of analyzing the inventory to group instrumentation comprises filtering the instrumentation based upon the state of the software component before the occurrence of instrumentation and the state of the software component after the occurrence of instrumentation* (e.g., col.5: 3 – col.7: 22).

Claim 31:

The rejection of claim 10 s incorporated. Lovy also discloses *the step of analyzing the inventory to group instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component comprises labeling each group of instrumentation as a single transition action from one state of operation of the software component to another state of operation of the software component* (e.g., col.8: 40 – col.9: 27).

Claim 32:

The rejection of claim 10is incorporated. Lovy also discloses *the step of analyzing the inventory to group instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component comprises using an application to analyze the inventory to group instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component* (e.g., col.15: 35 – col.16: 8).

Claim 33:

The rejection of claim 10 is incorporated. Lovy also discloses *the step of analyzing the inventory comprises determining a component to blame for instrumentation indicating a failure of the software component* (e.g., col.36: 56 – col.37: 34).

Claim 34:

The rejection of claim 26 is incorporated. Lovy also discloses *the step of generating the health model comprises generating a state diagram* (e.g., col.27: 61 – col.28: 23).

Claim 35:

The rejection of claim 1 is incorporated. Lovy also discloses *the step of generating a state diagram comprises using an application to generate the state diagram* (e.g., col.27: 42-60).

Claim 36:

Claim 36 is a computer storage medium version, which recites the same limitations as those of claim 10, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 36.

Claim 41:

The rejection of claim 10 is incorporated. Lovy also discloses *the health model is configured to detect cycles of change in states of operation* (e.g., col.36: 56 – col.37: 34).

Claim 42:

The rejection of claim 41 is incorporated. Lovy also discloses *at least one of the cycles of change in states of operation comprises a cycle of failure and recovery* (e.g., col.27; 61 – col.28: 23).

Claim 44:

The rejection of claim 42 is incorporated. Lovy also discloses *the computer system automatically suppresses notification of a failure when an anti-alert is received* (e.g., col.27; 42-60).

14. Claims 1, 9-10, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,968,291 to Desai (art made of record, hereinafter "Desai").

Claim 1:

Desai discloses *a computer system for building a health model of software components, comprising:*

one or more processors; system memory; and one or more physical computer-readable media having stored thereon computer- executable instructions representing modules configured to build a health model of software components (e.g., FIG.4, col.4: 32-67), *the modules including:*

an instrumentation collector for receiving information specifying instrumentation of software components (e.g., FIG. 9, blocks 100-104, col.7: 48 – col.8: 26);

a health model generator for creating a health model using the information about the instrumentation of the software components (e.g., FIG. 9, block 114, col.8: 1-26; FIG. 13, col.10: 21-67); *and*

an instrumentation analyzer for grouping instrumentation that result in the same transition from one state of the health model to another state of the health model, the instrumentation analyzer grouping mapped instrumentation into groups that have the same state of operation before the instrumentation is generated and the same state of operation after the instrumentation was generated (e.g., FIG. 9, blocks 106-110, col.7: 48-67; FIG. 12, col.9: 42 – col.10: 20).

Claim 9:

Claim 9 is a computer storage medium version, which recites the same limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 9.

Claim 10:

Desai discloses *a method for building a health model of a software component, comprising the steps of:*

receiving an inventory of instrumentation of the software component (e.g., FIG. 9, blocks 100-104, col.7: 48 – col.8: 26)*;*

mapping the inventory of instrumentation to states of operation of the software component; analyzing the inventory to identify instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 9, blocks 106-110, col.7: 48-67)*;*

grouping the identified instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component, the grouping comprising grouping mapped instrumentation into groups that have the same state of operation before the instrumentation is generated and the same state of operation after the instrumentation was generated (e.g., FIG. 12, col.9: 42 – col.10: 20)*; and*

generating the health model with the states of operation and at least one transition representing a group of instrumentation from one state of the health model to

another state of the health model (e.g., FIG. 9, block 114, col.8: 1-26; FIG. 13, col.10: 21-67).

Claim 36:

Claim 36 is a computer storage medium version, which recites the same limitations as those of claim 10, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 36.

Conclusion

15. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be reached on Monday, Tuesday, Thursday, and Friday from 6:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao

TUAN DAO
SUPERVISORY PATENT EXAMINER